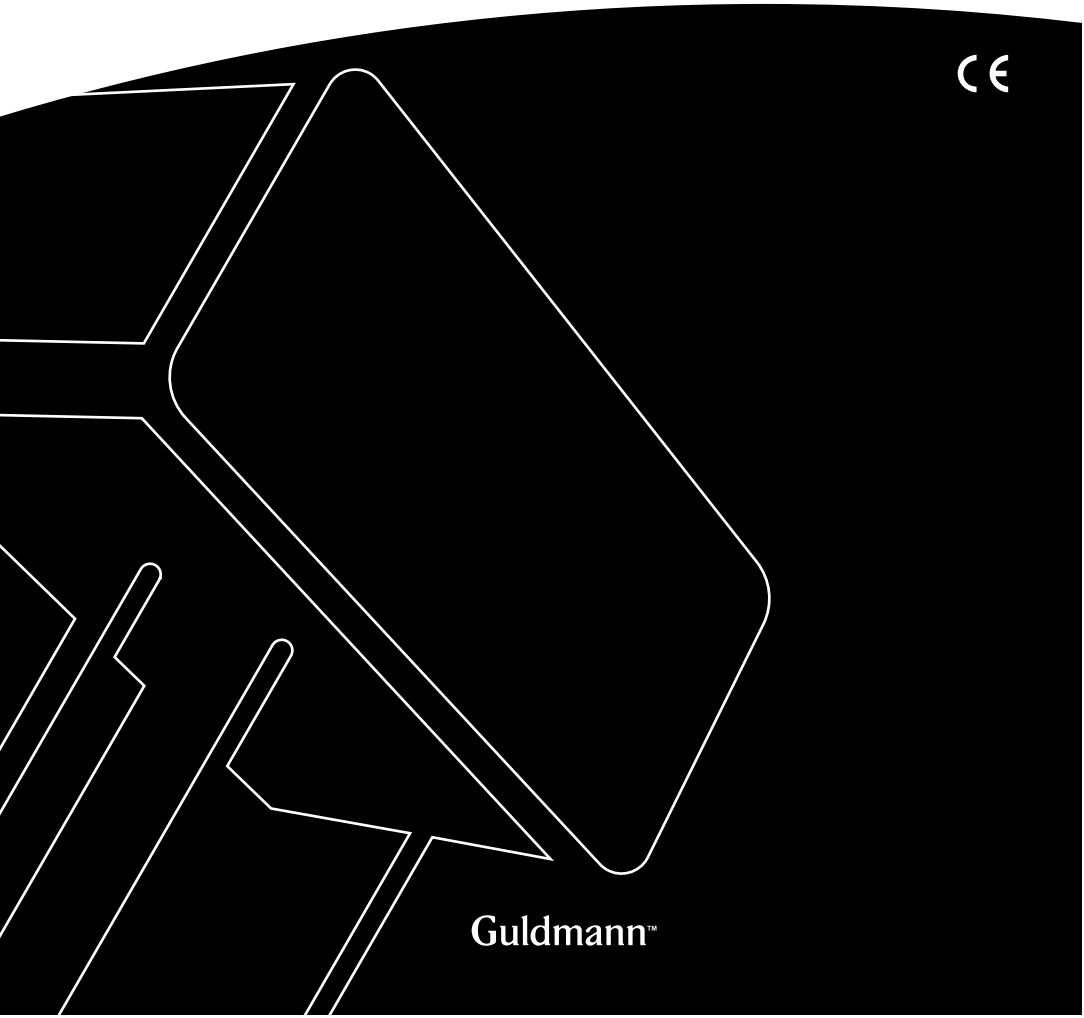
GB/US . . . . GH3/GH3+ Ceiling Hoist

Vers. 2.00



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GH3 Lifting modules, version type nomenclature									
Guldmann hoist type	Product line	Load in kg	Number of lifting straps	Number of lifting motors	Number of horizontal drive motors	Scale module	CLM module	Service module	User interface
GH3	(x)	xxx	x	x	x	x	x	x	x
GH3		200	1	1	1				
		250	1	1	1				
	+	250	1	1	1	None : 0 Scale : 1	None : 0 CLM : 1	None : 0 Service: 1	Hand control: 0 IR : 1
		300	1	2	2				
		350	1	2	2				
	Twin	250	2	2	0				
		500	2	4	0				
GH3	X	Y	Z	Z	Z	Q	Q	Q	Q

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GH3/GH3+ Ceiling Hoist

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1.00 Purpose and use

1.01 Manufacturer

V. Guldmann A/S
Graham Bells Vej 21-23A
DK-8200 Århus N
Tel. + 45 8741 3100
Fax. + 45 8741 3131
www.guldmann.com

1.02 Purpose

The GH3 is a ceiling-mounted hoist, which covers the need for lifting or moving a person in hospitals, nursing homes, institutions, swimming pools, riding schools and private homes.

Conditions for use

The use of the GH3 is subject to the following:

- The GH3 should only be used by trained personnel.
- The maximum nominal load, 200 kg (440 lbs), 250 kg (550 lbs), 300 kg (660 lbs), 350 kg (770 lbs) respectively, must not be exceeded.
- The instruction offered by Guldmann to all customer groups in connection with the purchase of a ceiling-mounted hoist has been received.
- The helper pays attention to the well-being of the user when using the hoist.
- The hoist is used in rail systems which are installed, tested and approved according to Guldmann's stipulation.
- Only technicians who have been certified by Guldmann may install and test the rail systems.
- The hoist is used with the Guldmann lifting hanger or with other suitable hanger *(section 1.08)*.
- The hoist is used with a Guldmann lifting sling or with other suitable slings *(section 1.09)*.

1.03 Important/Precautions

- Read the instructions carefully before using the GH3 and in connection with cleaning and service of the hoist.
- The GH3's maximum load must never be exceeded.
- The GH3 may only be used to lift a person.
- The red strap for the emergency stop and the emergency lowering must be adjutsed to the helpers reach, and must not be removed.
- The GH3 must not be used where there is a risk of it being splashed with water.
- If a defect appears during use of the GH3, stop using the hoist and contact the Guldmann Service Team for repairs. The GH3 is controlled by a microprocessor PCB, which can be damaged by static electricity if touched without the necessary precautions, (*see point 1.07)* The electronics may only be serviced by Guldmann approved service technicians.

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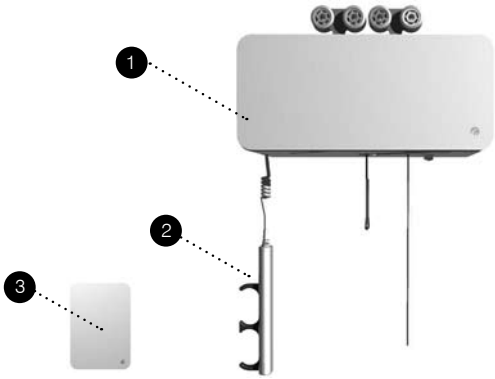
1.04 Load limits on GH3 system

Read the label which indicate the maximum load limits for each component. The components, e.g. lifting hanger, lifting sling, etc. labelled with the lowest load limit determines the maximum load limit for the entire system.
This maximum load limit must not be exceeded.
Please note that the max load may change when different components are used, such as lifting hangers, lifting slings, etc.

1.05 Unpacking and Preparation

Visual check of the GH3.
If the GH3 is thought to be damaged upon reception, the GH3 must not be used before it has been checked and approved by a qualified person or the Guldmann Service Team.



Contents of the box

1. GH3 hoist
2. Hand control
3. Transformer
4. Manual
5. Label for rail system

1.06 Placing a new GH3 Hoist in an existing rail system

Please notice, placing a new GH3 hoist in an existing rail system it must be ensured that:

- The rated max load of the rail system, must be equal or higher than the max load of the new hoist.
  - If there is no max load mentioned on the rail system, the rail system must then be checked according to the guideline in the installation manual (distance between bracket according to max load)
  - If the brackets are not visible, then a load test with 1,5 x max load of the hoist must be performed. The deflection of rails must not be higher than 1/200 of the length of the rail.
  - If it is not possible to do any of the above mentioned, please contact Guldmann or their representative

- If the rail system can not be rated to the same max load as the hoist, then extra brackets must be installed according to the installation manual (distance between bracket according to max load).

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Class I equipment
Fixed rail systems are class I equipment and ***must*** be installed by a qualified technician or by Guldmann Service Team.
Equipment is disconnected from Supply Mains by breaking the mains breaker switch.

Class II equipment
Mobile equipment is class II epuipment (marked with double-encassed symbol) and can be connected to the mains direct by the user.
Equipment is disconnected from Supply Mains by detaching the mains plug from the wall outlet.

Emergency stop device
The emergency stop device must be reset in order to connect power to the product. To do this, push the yellow reset button *(see point 2.09)*.

1.07 **Power supply**

GH3 is equipped with batteries that require regular recharging. The power supply for charging and the battery charging point must be connected by a qualified engineer or by Guldmann Service Team.
The transformer supplied must ***always*** be used.

Safety concerning static electricity (ESD)
Service technicians and installers must use an ESD-safety package consisting of a mat, a ground wire, and a bracelet. The technician/installer connects the mat to a grounding point, for instance a radiator or a water pipe. The technician/installer must then put on the bracelet and connect it to the mat. If it is not possible to find a grounding point, the mat and the bracelet must be used as a minimum.
Only then is it allowed to work with the PC Board or components where it is possible to come into contact with the PC Board.

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1.08 Installation of the lifting hanger before use

Lifting hangers from other manufacturers
Guldmann shall not be liable for faults or accidents that may occur as a result of using lifting hangers made by other manufacturers.

If there is any doubt about the selection or use of a lifting hanger, please contact your supplier.

The lifting hanger can be installed to the lifting strap without the use of any tools.

1. Hold the lifting hanger in the right hand and press the yellow button using the thumb as shown *(Fig. 1)*

2. Insert the strap attachment in the slot on the lifting hanger top cover with the open side facing down *(Fig. 2a, 2b)* and release the yellow button *(Fig. 2c)*

3. Rotate the strap attachment to a vertical position *(Fig. 3)*

4. Check that the yellow button has returned to its locked position by checking that it is flush with the cover of the lifting hanger and that the strap attachment can rotate freely.

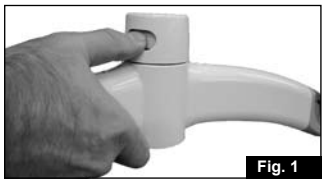
Fig. 1

Fig. 2a

Fig. 2b

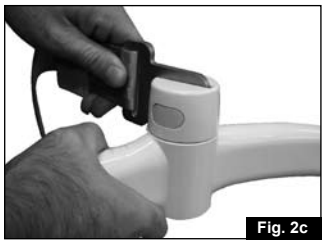
Fig. 2c

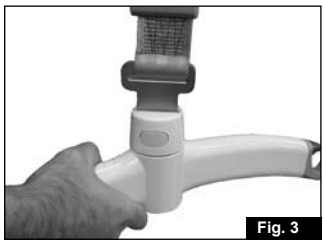
Fig. 3

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1.09 **Lifting sling**

A lifting sling with four to six lifting straps designed for mounting on hooks should be used when using a Guldmann lifting hanger. Place the straps on the hooks. Make sure that the rubber safety catch returns to its start position, so the straps can not unintentionally fall off.

Slings made by other manufacturers

Guldmann shall not be liable for faults or accidents that may occur as a result of using lifting slings made by other manufacturers.

If there is any doubt about the selection or use of a lifting sling, please contact your supplier.

Guldmann shall not be liable for faults or accidents due to incorrect use of the lifting sling, or for reasons of inadequate attention on the part of the carer or user.

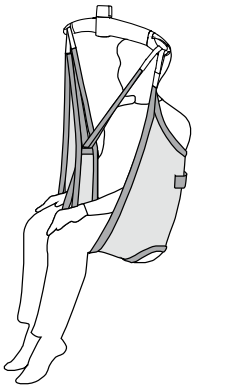
Working with the GH3

The GH3 runs easily in the rail system and does not have any special requirements for space or power in connection with moving. Attention can thus be fully focused on the user's functional level and the helper's technique.

If the hoist is used correctly, the user should only be lifted to the extent that she/he is clear of the surface and should be moved at this height.

Attaching the lifting sling

Place the straps from the lifting sling on the hooks on the lifting hanger. Start with the uppermost set of straps (from the back) and then take the lowest set of straps (from the legs).



Important!

Be careful when applying the lifting sling. Check that the straps have been pulled completely through the rubber safety catch and into place in the lifting hanger's hooks before starting lifting the user.

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Lifting to and from a seated position
When lifting a user from e.g. a wheelchair, move the GH3 towards the person to be lifted.

The lifting hanger should be at the same height as the user's chest and should not be moved further in over the user than to approximately mid-thigh position.

Place the lifting hanger parallel to the user's shoulders.

Place the lifting sling behind the user's back between the back of the chair and the user's back.

The centre band of the lifting sling should follow the user's spine. As for the slings type Active the strap showing the size of the sling should be opposite the spine. Lead the leg straps along the outer sides of the user's shins and beneath the thighs between the hollow of the knees and the hip joints. Cross the leg straps in front of the user.

All four lifting straps are now ready to be attached. The lifting sling can now be mounted on the lifting hanger.

Lifting to and from lying position in bed
Bring the lifting hanger over the centre of the person to be lifted.
Place the lifting hanger parallel to the user's shoulders.
Turn the user onto his or her side. The High Back sling should be placed so that its top is at the same height as the top of the user's head. Now position the sling over the user so that the centre band follows the user's spine. Turn the user onto his or her back and pull out the remaining part of the lifting sling. Place the leg straps beneath the user's thighs and cross them. All four lifting straps are now ready to be attached and the lifting sling can now be mounted on the lifting hanger. It is an advantage to elevate the head of the bed so that the user is sitting up.

Only persons who have received competent instruction regarding the use of lifting equipment and fitting of slings should use the hoist.

Important!
Plan the move. Avoid leaving the user in the lifting sling unattended. The GH3 lifts quickly and powerfully. Before lifting, check that the user is completely free of his/her surroundings. The user's head, arms, hands and feet must not be in danger of becoming trapped. Be careful with any tubes and wires that are attached to the user. Check that the hand control and hand control cable is free of hanger, patient and other object before the hoist is activated up or down moved.

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1.10 Swing kit

The swing function is used in conjunction with a transfer e.g. through a door from one lifting module to another.

Note: *The swing adapter must be ordered separately.*

Fig. 1

Installation of swing adapter

1. Before starting a lift involving a swing transfer the swing adapter *(Fig. 1)* must be installed on the lifting hanger. *(Fig. 2 to 5)*

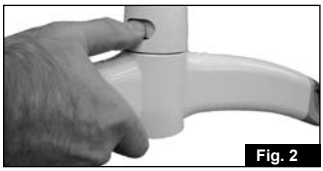
Fig. 2

2. Hold the lifting hanger in the right hand and press the yellow button using the thumb *(Fig. 2)*

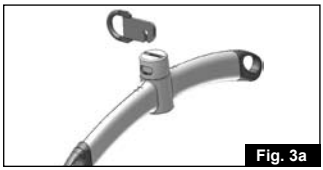
Fig. 3a

3. Insert the swing adapter in the slot on the lifting hanger top cover with the open side facing down *(Fig. 3a, 3b)* and release the yellow button.

Fig. 3b

4. Rotate the swing adapter to a vertical position *(Fig. 4)*

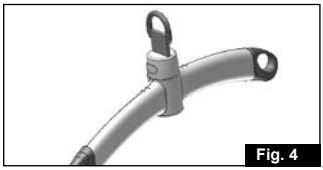
Fig. 4

5. Check that the yellow button has returned to its locked position by checking that it is flush with the cover of the lifting hanger and that the swing adapter can rotate freely.

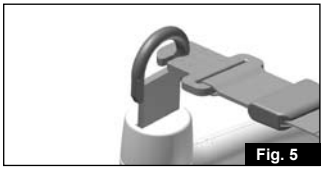
Fig. 5

6. Install the strap attachment to the swing adapter by sliding the open side of the strap attachment over the flat area of the swing adapter *(Fig. 5)*

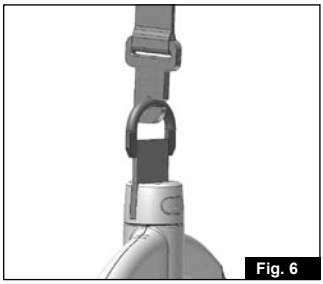
Fig. 6

7. Rotate the strap attachment and ensure that it moves up on the circular portion of the swing adapter *(Fig. 6)*

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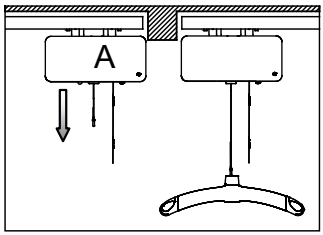
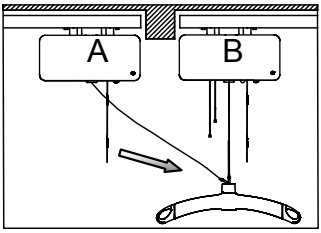
1.11 Using swing kit in doorway

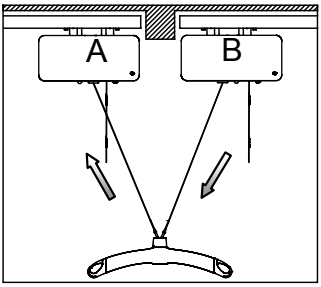
1. Bring the two hoist as close together as possible. Adjust the height of the lifting hanger on hoist B so that the transfer can be done without the user touching the floor during the transfer from one hoist to another.



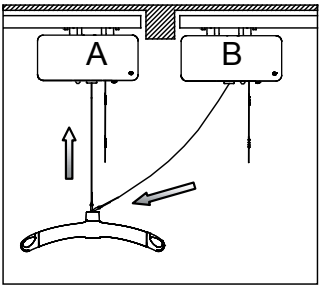
2. Take the free lifting strap from hoist A and secure it to the swing adapter on the lifting hanger *(see 1.10 figures 5 and 6)*. In order to lower the free lifting strap on hoist A a slight pull must be applied to the strap.



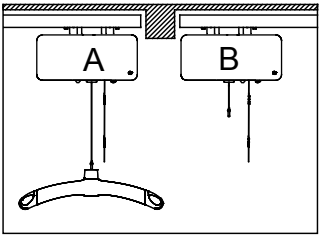
3. Lower the lifting hanger using hoist B while lifting the strap on hoist A to perform the swing transfer. The transfer has been completed when there is no load on the lifting strap on hoist B



4. Disconnect the lifting strap on hoist B from the lifting hanger and raise the strap on hoist B out of the way.



5. Move the lifting hanger from hoist A to operating height and the doorway transfer is complete.



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1.12 GH3 with horizontal drive motor

The GH3 with horizontal drive motor can operate in the rail system.
Be aware that the drive motor takes time to both accelerate and brake the hoist.

It is possible to position the hoist with horizontal driving motor with a high degree of accuracy by a brief activation of the hand control.

The GH3 with horizontal drive motor runs on its own power and it should not be pulled through the rail system.

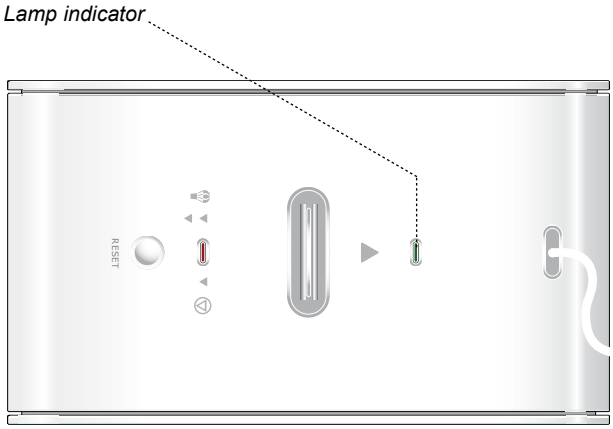
1.13 GH3 with horizontal drive motor and infrared remote (IR) control

The GH3 has an integrated IR receiver which is controlled by the IR remote control.

The hand control should be left attached to the hoist.
This means that the hoist can always be operated, in the the event that the IR remote control is mislaid or the battery is uncharged.

2.00 Description of functions

Information panel on the GH3 bottom surface.



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2.01 Pictograms

Emergency stop

Emergency lowering function

RESET **Reset emergency stop**

Direction of travel (horizontal drive motor) denoted by grey arrow

2.02 Indicator lamps and audio signals

Status	Indicator lamps	Audio signals	Possible GH3 Functions				
			Up	Down	Emergency lowering	Horizontal drive motor	Communication
Off – stand by	Off						
All OK	Green		x	x	x	x	x
No charging	Yellow, after 15 sec	3 x Beep after 60 sec	x	x	x	x	x
Low battery	Yellow		x	x	x	x	x
Fault on hoist	Yellow	Beeps at button activation			x		x
Battery critical low	Yellow	Beeps at button activation that is not permitted		x	x		x
Over load	Yellow	Beeps at button activation		x			x

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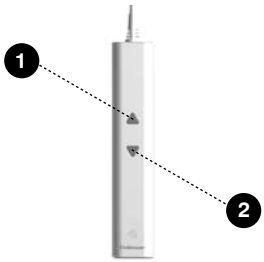
2.03 Operation

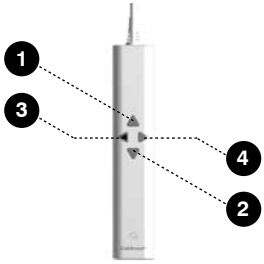
Hand control
The GH3 is switched on automatically when a button on the hand control is pressed.

The GH3 is switched off automatically after approx. 8 minutes without activation.

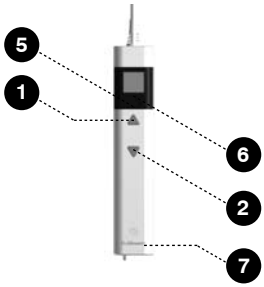


GH3
1. Lift
2. Lower

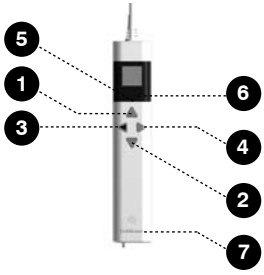
GH3 with horizontal drive motor
1. Lift
2. Lower
3. Movement in the direction of the arrow on the GH3 information panel.
4. Movement in the direction opposite to the arrow on the GH3 information panel.



GH3+
1. Lift
2. Lower
5. Function selection button *(section 2.05, supplementary modules)*
6. Function selection button *(section 2.05, supplementary modules)*
7. PDA interface (mini USB) *x)*



GH3+ with horizontal drive motor
1. Lift
2. Lower
3. Movement in the direction of the arrow on the GH3 information panel.
4. Movement in the direction opposite to the arrow on the GH3 information panel.
5. Function selection button *(section 2.05, supplementary modules)*
6. Function selection button *(section 2.05, supplementary modules)*
7. PDA interface (mini USB) *x)*



x) Accessories to CLM module
(see Supplementary modules, GH3+ (section 2.04))

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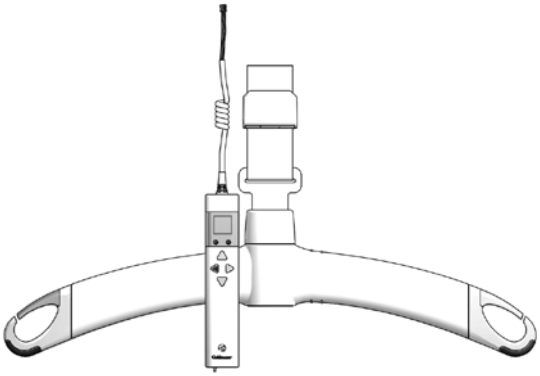
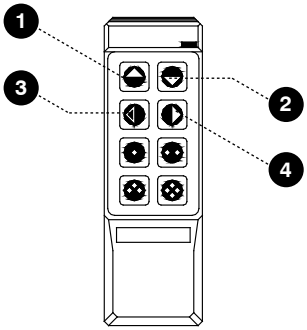
Parking the hand control
When the hand control is not in use it can be placed on the lifting hanger.



Infrared remote control

1. Lift
2. Lower
3. Movement in the direction of the arrow on the GH3 information panel
4. Movement in the direction opposite to the arrow on the GH3



Note:
In order for the GH3's lowering function to work, the strap must be carrying a load equal to the minimum capacity for Guldmann's lifting hanger.

Transport/running in the rail system
The GH3 is manually pushed forward in the rail system by the helper. The GH3 with horizontal drive motor will run in the rail system when activated by the hand control/remote control.

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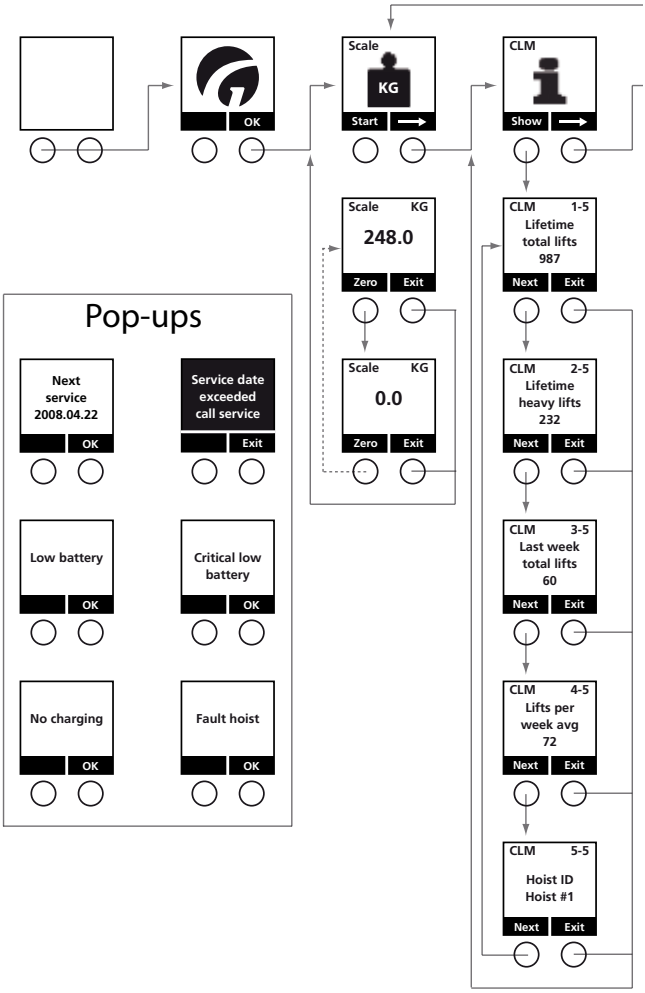
2.04 Supplementary modules, GH3+

There are various supplementary modules for the GH3+

- Scale module (GH3+ with integrated scale)
- CLM module (GH3+ with statistical function for management use)
- Service module (GH3+ with Service module)

Menu structure, Supplementary modules GH3+
(Detailed description follows in sections 2.05-2.09)



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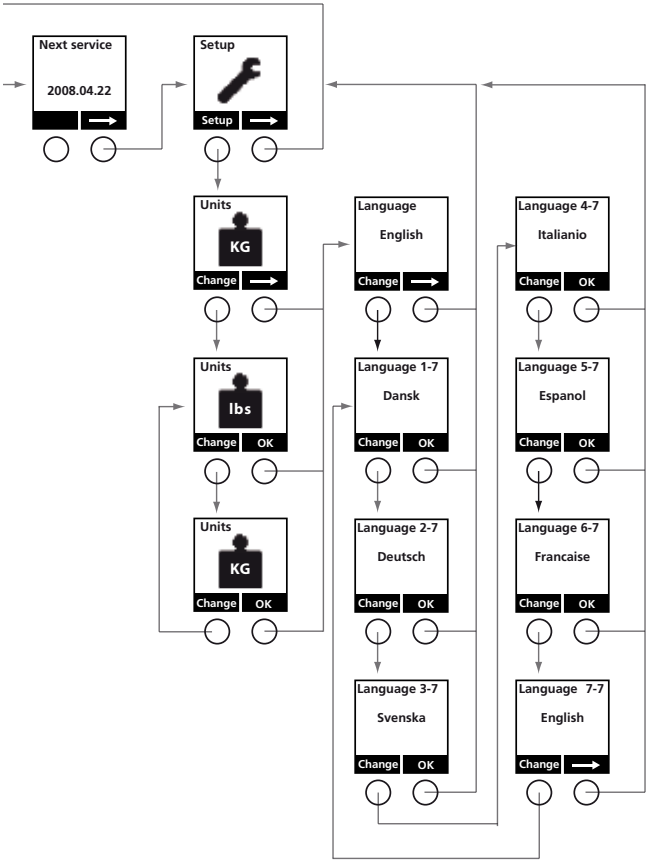

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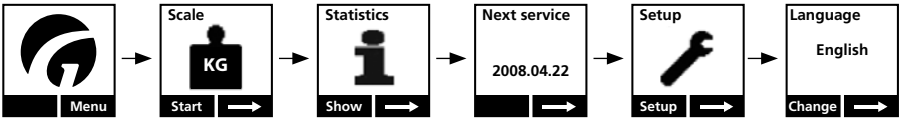
2.05 Configuration of supplementary modules, GH3+

Before the GH3+ is put into use, the hoist must be configured. Configuration covers language (Scale module/CLM module/Service module) and the unit for specification of weight (Scale module).

Factory setting:	Language:	English (UK)
	Unit of weight:	kg

Configuration of supplementary modules takes place from the GH3+ hand control.

Setting the language



1. Press any key on the GH3+ hand control to activate the hoist.
   When the hoist is activated, the display on the hand control is switched on and the Guldmann logo “G” appears.

2. Select “Menu” using the function key located immediately below the display and then select “ → ” until the “Setup” menu appears in the display.

3. Select “Setup” and then “→” until the “Language” menu appears in the display.

4. Select “Change” until the preferred language appears in the display, and confirm the selection by pressing “OK”.

5. Then return to “Setup”. Select “ → ” to return to the start menu.

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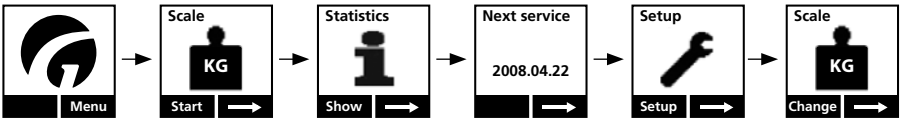
Setting the units, kg/lbs (Scale module)



1. Press any key on the hand control to activate the hoist.
   When the lifting module is activated, the display on the hand control is switched on and the Guldmann logo “G” appears.

2. Select “Menu” using the function key located below the display

3. Then select “➔” until the “Setup” menu appears in the display.

4. Select “Setup” and then “➔” until the “Units” menu appears in the display.

5. Select “Change” to switch between the units kg and lbs, and confirm the selection by pressing “OK”.

6. Select “➔” to return to the start menu.

7. The display in the hand control switches off automatically after use (approx. 8 min). *(See the complete menu summary, section 2.04, Supplementary modules, GH3+)*

2.06 Scale module (GH3+ with integrated scale module)

The GH3+ with scale module (option) provides the facility to determine the user’s weight.

Warning!
The integrated scale in GH3+ is not approved to determine mass in medical practice, including the weighing of patients in connection with health monitoring, diagnosis and medical treatment.

(The provisions for medical weighing are specified in accordance with EEC Directive 90/384)

Shock effects
The GH3+ with scale module includes high-sensitive sensors to register mass corresponding to the nominal recommended load. The sensors are highly sensitive and can be damaged by the effects of shock, for example pulling the GH3+ at extreme speed into an end stop.

Operation
Always reset the GH3+ scale module before weighing takes place. When resetting the unit, the lifting hanger and the desired lifting sling must be attached under the hoist.

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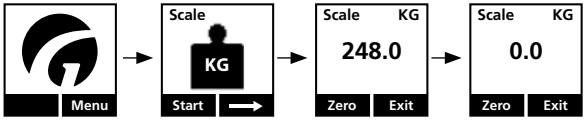
Resetting the unit (tara)



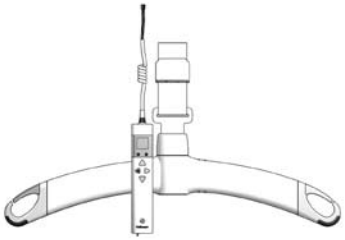
1. Press any key on the hand control to activate the hoist.
   When the lifting module is activated, a display on the hand control is switched on and the Guldmann logo “G” appears.

2. Select “Menu” using the function key located immediately below the display

3. Then select “➔” until the “Scale” menu appears in the display.

4. Then select “Start”.

5. Park the hand control on the lifting hanger. (If the helper pulls the hand control during weighing, this will affect the result of the weighing process).



6. When the lifting hanger with the lifting sling is at rest, select “Zero” to reset the GH3+ scale module.

   The scale module has now been reset and weighing can commence.

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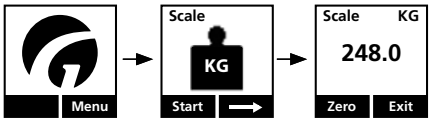
Weighing



1. Always reset the GH3+ scale module before weighing takes place, see section entitled “Resetting the unit”.

2. Place the lifting sling on the user and attach it to the lifting hanger.

3. Lift the user with care.

4. Park the hand control on the lifting hanger.

5. Select “Menu” using the function key located immediately below the display and then select “➔” until the “Scale” menu appears in the display.

6. Then select “Start”.

7. When the sling and the user are at rest and hanging freely, the current weight can be read on the display. (The weight can be read to an accuracy of 1 decimal place).

8. Select “Exit” to return to the main menu.

Note:
The display in the hand control switches off automatically after use (approx. 8 min.)

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2.07 **CLM module (GH3+ with statistical function for management use)**

The GH3+ with CLM module (option) includes a management tool that saves important information on the use of the lifting module and which can be used to evaluate the system's efficiency and utilisation, as well as to optimise its use and hoist name/location.

The following data can be shown on the hand control's display: number of lifts, number of heavy lifts, number of lifts in last week, average number of lifts per week.

As an additional option, by connecting a PDA/Net Book to the hand control it is possible to gain access to a number of other saved data, e.g. the number of lifts since the last strap change, number of critically low battery readings, number of weighings, total lifting time, etc.
This information can be downloaded and used for further analysis.
(PDA/Net Book readouts requires a PDA/Net Book with Guldmann CLM software).

Number of lifts, total	A lift is registered automatically when the following events are registered simultaneously • Hand control is activated (Direction UP) for more than 5 seconds • The load on the lifting strap is registered as being within the range: 30 kg – Recommended load kg (66 lbs – Recommended load lbs) Total includes the number of lifts performed after the lifting module was first taken into use.
Number of heavy lifts, total	A heavy lift is registered automatically when the following events are registered simultaneously • Hand control is activated (Direction UP) for more than 5 seconds • The load on the lifting strap is registered as being within the range: 150 kg – Recommended load kg (330 lbs – Recommended load lbs) Total includes the number of heavy lifts performed after the lifting module was first taken into use.
Number of lifts, last week	The total number of lifts performed within the last seven calendar days
Average number of lifts per week	Average number of lifts per week (performed after the lifting module was first taken into use)

The data for "Number of lifts, last week" and "Average number of lifts per week" can, if necessary, be reset using a PDA/Net Book.

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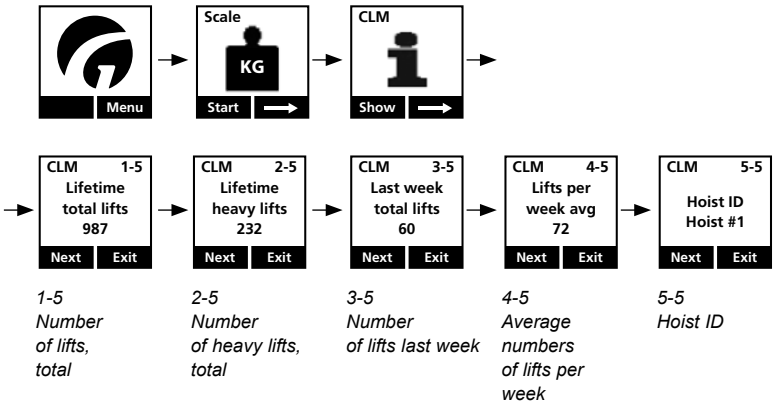
Operation



1-5
Number of lifts, total

2-5
Number of heavy lifts, total

3-5
Number of lifts last week

4-5
Average numbers of lifts per week

5-5
Hoist ID

1. Press any key on the GH3+ hand control to activate the hoist.
   When the lifting module is activated, the display on the hand control is switched on and the Guldmann logo “G” appears.

2. Select “Menu” using the function key located below the display.

3. Then select “➔” until the “CLM” menu appears in the display.

4. Then select “Show”.

5. Then select “Next” until the required information appears in the display.

6. Select “Exit” to return to the main menu.

Note:
The display on the hand control will automatically revert to the screensaver after approx. 8 min.

Accessories for the CLM module, GH3+
The CLM module includes an extended management menu which can be operated via a PDA/Net Book (with Guldmann CLM software installed).
The PDA/Net Book is connected to the GH3+ hand control via a mini USB plug located in the base of the hand control (see section 2.04).
Contact supplier or the Guldmann Service Team for further information about CLM accessories.

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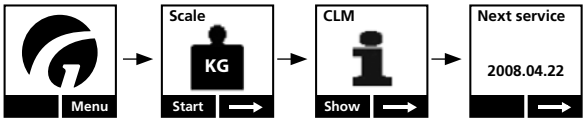
2.08 Service module (GH3+ with service module)

The GH3+ with Service module (option) saves all of the information about time and indication of next safety/service inspection.

The GH3+ with Service module specifies the date of the next safety/service inspection.

Operation



1. Press any key on the hand control to activate the hoist. When the lifting module is activated, a display on the hand control is switched on and the Guldmann logo “G” appears.
2. Select “Menu” using the function key located immediately below the display.
3. Then select “➔” until the “Next service:” menu item appears in the display.
4. Read off the date of the next safety/service inspection (Year, Month, Date).

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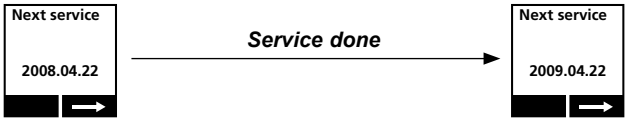
Pop-Up's for Service module (supplementary module)

There are two different Pop-Up's (brief messages on the display) on the GH3+ with Service module. These pop-up's notify the user of upcoming and exceeded dates for service inspections.

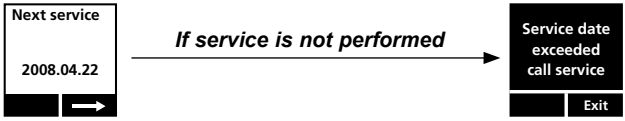
Both Pop-Up's appear immediately after the hand control has been switched on.

Pop-Up's before and after "Service Date"



1. Pop-Up, 30 days
   The next service inspection must be undertaken within 30 days.

   Select "OK" to return to the main menu
   (returns automatically after approx. 5 seconds).



2. Pop-Up, Service date exceeded
   The date of the service inspection has been exceeded, contact the Guldmann Service Team.

   Select "Exit" to return to the main menu (returns automatically after approx. 5 seconds).

Attention!
The hoist's lifting function is switched off in connection with the second Pop-Up "Service date exceeded". The lifting module's lowering function can still be used.

Note:
The display on the hand control will automatically revert to the screensaver after approx. 8 minutes.

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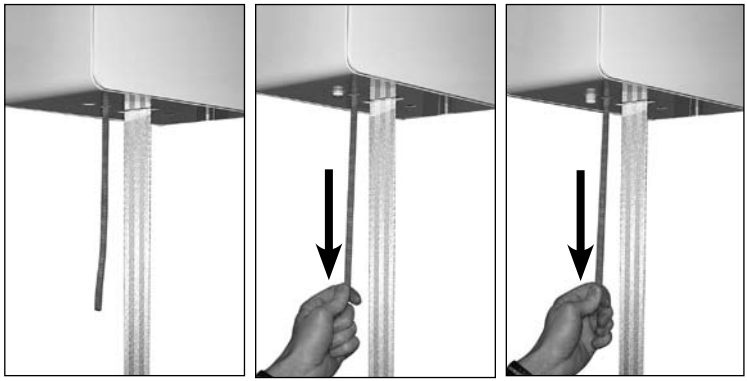
2.09 Safety functions

The emergency stop and emergency lowering device should only be used in an emergency
In the event that it is necessary to use the safety functions, the fault must be identified and rectified before the GH3 is taken into use again.
Please contact your supplier.

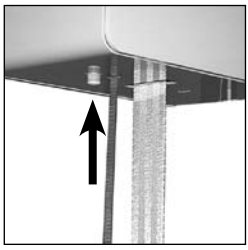
Emergency and lowering strap
The red strap has the following functions:

- One pull: Emergency stop is activated.
- Constant pull (2 steps): Emergency lowering is activated



Emergency stop
If the GH3 does not stop/react to the hand control when the GH3 is in use, pull the red strap and all lifting/lowering/horizontal driving functions (except emergency lowering) are deactivated.
When the emergency stop is activated, the hoist will not function. The green lamp is switched off.

Reset emergency stop
Reset the emergency stop by pressing the yellow button on the bottom of the hoist.



The yellow button that appears when the emergency stop is pulled, must be pressed manually before the GH3 is ready for use.
After deactivating the emergency stop, activate the hand control twice:

- First to switch on the hoist
- Then to initiate movement, e.g. lift/lower.

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Emergency lowering function, electric
If the GH3 fails, the electrical emergency lowering function is used to lower the user safely. The emergency lowering function is operated by a constant pull on the red strap that is used for the emergency stop.

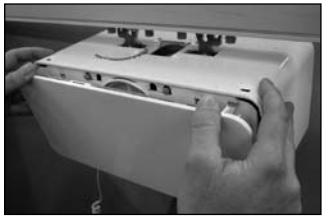
When releasing the red strap, the emergency lowering function will be replaced by the emergency stop.

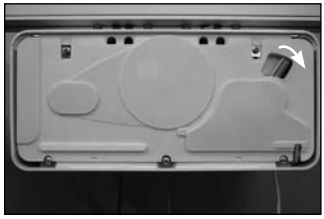
Emergency lowering function, mechanical
If the electrical emergency lowering function in the GH3 fails, the emergency lowering can be done mechanically.

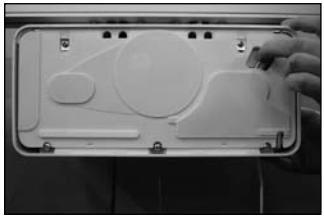
1. Remove the side covers.
   Release the side covers from the top of the hoist by means of a gentle push on the fixing points on each side. The covers are tipped free of the hoist and can be removed.

2. Then release the hoist's motor by turning the handle bearing the words "EMERGENCY DOWN". This handle is located immediately behind the side cover and must be turned clockwise.

   Note:
   For hoists with a recommended load of more than 250 kg (550 lbs), there are two motors and therefore two handles to activate, one on each side.







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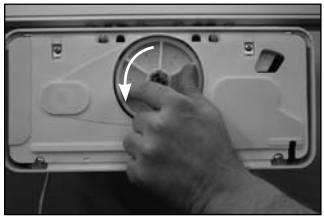
3. When the brake(s) has/have been released, the user will be lowered slowly. If the total weight of the user and the lifting accessories is low (e.g. less than 50 kg (110 lbs), it may be necessary to help the user down by turning the large belt wheel located on the opposite side of the handle and in the direction of arrow marked on the belt wheel.



Note:
A GH3 with a recommended load of more than 250 kg (550 lbs) has two motors, and therefore two belt wheels to activate, one on each side.

Warning!
After the mechanical emergency lowering function has been activated in the GH3, the hoist MUST be serviced by a qualified technician or by the Guldmann Service Team.

2.10 Charging/connection

The GH3 is automatically charged troughout in straight rails. This guarantees the hoist functionality and maintains the batteries to ensure a long lifetime.

The indicator lamp on the bottom of the hoist turns yellow if the charge status becomes low or if there is a complete interruption to the charging function. The GH3 then has a limited number of lifts available at a time and must be re-charged.

The transformer must be connected and switched on before charging can take place. A green indicator lamp on the transformer indicates that it is connected and switched on.

2.11 Accessories

Guldmann – ABC slings and lifting hangers
Obtain a special brochure from your distributor, manufacturer or at www.guldmann.com

Extension strap
The extension strap is used where the distance between the lower part of the rails and the floor exceeds 3,5 m (11'/7"). The extension strap is available as an accessory.

Batteries
NiMH Battery 24V/2800mAh, Guldmann type number 550182.

Transformer
Transformer, Class 1, Guldmann item number 551468
Transformer, Class 2, Guldmann item number 550269 (EU), 550268 (US/CAN)

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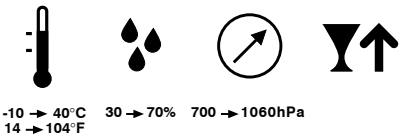
3.00 Transport and storage

Guldmann recommends that the GH3 is always transported and stored in the original packaging.

Key to symbols on the GH3 packaging:



The GH3 should be stored at:
– Temperatures between -10 and +40°C / 14 and 104°F
– A relative air humidity of between 30 and 70 %
– An air pressure of between 700 and 1060 hPa

4.00 Maintenance and storage

4.01 Cleaning

Clean the GH3 with a damp cloth and mild handwash detergent.
Do not use strong acids, bases or alcohol to clean the GH3. Never clean GH3 in an autoclave.

4.02 Storage

See 3.00
For long-therm storage, disconnect the battery plugs.

4.03 How to prevent/avoid corrosion?

When the GH3 is mainly used in an corrosive environment, e.g. swimming pool, the hoist must be ordered with a special corrosion-preventive surface treatment.

4.04 The owner's daily maintenance duty

Check the lifting sling for wear and damage before use.
Do not use the lifting sling if it is damaged or defective.
Do not use the GH3 if the lifting strap is damaged or defective.
Contact your supplier and order a new lifting sling or a replacement of the lifting strap. Replacement of the lifting strap must only be performed by the Guldmann Service Team or by a qualified technician in accordance with Guldmann's instructions.

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4.05 **Disposal of the GH3 including batteries**

Local and national regulations on environmentally correct recycling must be observed.
Batteries (type NiMH) must always be delivered to an approved recycling point.

5.00 Service and lifetime

5.01 **Lifetime**

The GH3 has an expected lifetime of 15 years, on the condition of coorect use and correct service inspections, see section 5.02.

Replacement of components

Replacement of batteries, PCBs and lifting straps must be performed by a qualified service technician or the Guldmann Service Team.

5.02 **Safety/service inspections**

In accordance with international standard EN/ISO 10535 “Hoist for the transfer of disabled persons – Requirements and test methods” an inspection should be performed on the hoist at least once a year.
Guldmann recommends that regular safety/service inspection is performed at least once a year with regard to the pattern of usage.

Inspection of the GH3 must be performed by a qualified service technician or the Guldmann Service Team.
In connection with the purchase of the GH3, Guldmann may offer a service agreement for this inspection.

NB!
The GH3+ with service module may only be serviced by the Guldmann Service Team or by a qualified service technician with access to the PDA/Net Book with Guldmann software.

During the safety/service inspection a report must be prepared on what was checked and replaced. Parts that are worn or defective must be replaced with new parts from Guldmann. Spare parts drawings and documentation can be obtained from the manufacturer or supplier.

Documentation/checklist regarding safety/service inspection can be obtained from the manufacturer or supplier.

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5.03 Troubleshooting

The GH3 does not respond to the hand control's keys

1. Check the emergency stop is not activated
2. Check the hoist has power supply
3. Check the transformer is switched on and connected to the rail system
4. Contact the Guldmann Service Team

6.00 Classification

CE marking

Medical equipment with respect to electrical shock, fire and mechanical hazards only.
In accordance with UL 60601-1, CAN/CSA c.22.2 No. 601.1

Type B in accordance with UL/EN 60601-1

Read the manual before use

Must not be disposed of as standard household waste, must be recycled.

Class I equipment:	Permanent installation with protective ground
Class II equipment:	Non-permanent installation without protective ground

The equipment is not suitable for use in the presence of flammable mixtures.

Degree of protection against harmfull ingress of liquids (water)

Hoist	IP20
Hand control	IP44
Remote control	IP20
Transformer	IP20

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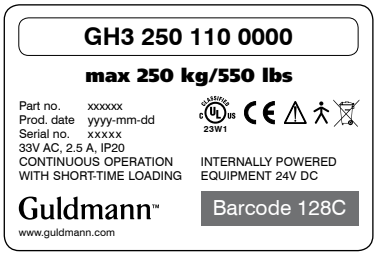
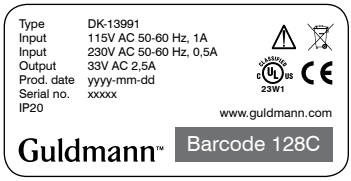
Examples of serial number label

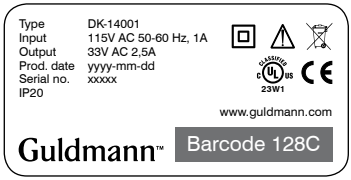
Lifting module



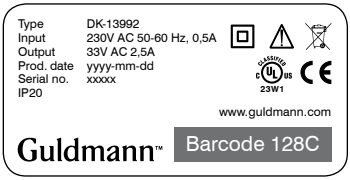
Transformer Class 1



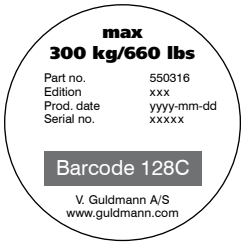
Transformer Class 2
Use within US/CAN



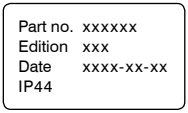
Transformer Class 2
Use within EU



Lifting hanger



Hand control



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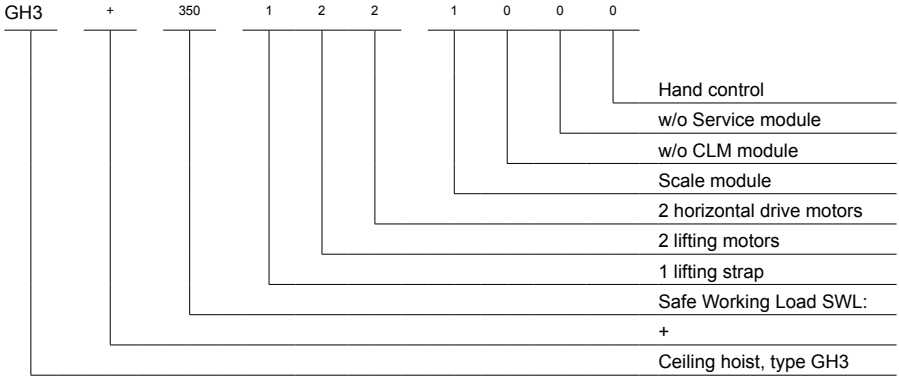
7.00 Certificates

UL 60601-1 UL No. 305250
EN/ISO10535 HMI No. 08.49A

8.00 Technical specifications

GH3 Lifting modules, version type nomenclature									
Guldmann hoist type	Product line	Load in kg	Number of lifting straps	Number of lifting motors	Number of horizontal drive motors	Scale module	CLM module	Service module	User interface
GH3	(x)	xxx	x	x	x	x	x	x	x
GH3		200	1	1	1				
		250	1	1	1				
	+	250	1	1	1	None : 0 Scale : 1	None : 0 CLM : 1	None : 0 Service: 1	Hand control: 0 IR : 1
		300	1	2	2				
		350	1	2	2				
	Twin	250	2	2	0				
		500	2	4	0				
GH3	X	Y	Z	Z	Z	Q	Q	Q	Q

Example: GH3+ 350 122 1000



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Functions

Lifting capacity, SWL . . . . . 200 kg (440 lbs), 250 kg (550 lbs)
300 kg (660 lbs), 350 kg (770 lbs)
Operation . . . . . .Hand control / IR
Sound level . . . . . .52 dB (A)
Horizontal speed . . . . . 18 m/min(709 inch/min)

	GH3	GH3+
Lifting speed		
85 kg (187 lbs) load	2,4 m/min (94 inch/min)	3,6 m/min (142 inch/min)
150 kg (330 lbs) load	2,4 m/min (94 inch/min)	3,6 m/min (142 inch/min)
Max capacity load, SWL	2,4 m/min (94 inch/min)	3,3 m/min (130 inch/min)
Max 5 kg (11 lbs) load	6,0 m/min (236 inch/min)	6,0 m/min (236 inch/min)

Weight and materials

SWL . . . . . 200 kg (440 lbs), 250 kg (550 lbs)
Own weight . . . . . 9,6 kg (21,1 lbs)
with horizontal drive motor. . . . . 10,5 kg (23,1 lbs)
with scale module and horizontal drive motor . . . . . 11,1 kg (24,5 lbs)

SWL . . . . . 300 kg (660 lbs), 350 kg (770 lbs)
Own weight . . . . . .14,2 kg (31 lbs)
with horizontal drive motor. . . . . .15,9 kg (35 lbs)
with scale module
and horizontal drive motor . . . . . .17,3 kg (38 lbs)

Covers . . . . . Impact-resistant UL 94 V-0 flame retardant recyclable plastic

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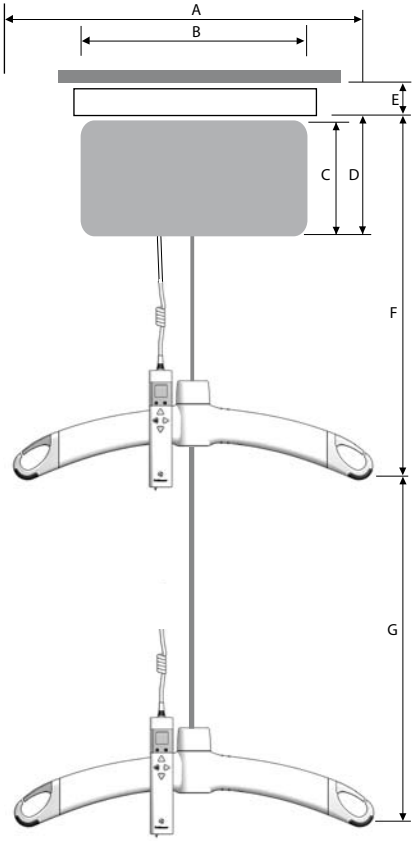
Dimensions

A . . . . . 580 mm (22,8 inch)
B . . . . . 345 mm (13,6 inch)
C . . . . . 156 mm (16,1 inch)
D . . . . . 184 mm (7,2 inch)
E, min. . . . . 82 mm (3,2 inch)
F, min . . . . . 284 mm (11,2 inch)
G . . . . . 2.500 mm (98,4 inch)
Depth of hoist . . . . . 205 mm (8,1 inch)

Safety

Emergency stop . . . . . Yes, mechanical and electrical
Emergency lowering device. . . . . Yes
Control of lifting strap . . . . . Yes
Cut-off angle . . . . . 45° along the rail 10° across the rail



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Electronics

On/off . . . . . Automatic when used. Soft start/stop
Overload protection . . . . . Automatic
Low Battery protection . . . . . Automatic
Power supply . . . . . 33V AC, 2.5 A
Supply voltage, transformer . . . . . 115/230V AC, 50/60 Hz

Battery . . . . . 24V NiMH
SWL: 200 kg (440 lbs), 250 kg (550 lbs) . . . . . 2.8 Ah
SWL: 300 kg (660 lbs), 350 kg (770 lbs) . . . . . 5.6 Ah

Continuous operation with short time loading with:
3 hours without recharging . . . . . 10/90% (2 min operation/18 min pause)

Max number of lifts in series with:
85 kg (187 lbs) . . . . . 55/1000 mm (250 inch)
SWL: 200 kg (440 lbs), 250 kg (550 lbs) . . . . . 28/1000 mm (250 inch)
SWL: 300 kg (660 lbs), 350 kg (770 lbs) . . . . . 40/1000 mm (250 inch)

Max charging time at 25ºC:
SWL: 200 kg (440 lbs), 250 kg (550 lbs) . . . . . 2 hours
SWL: 300 kg (660 lbs), 350 kg (770 lbs) . . . . . 4 hours

Operating temperature 10ºC-35ºC (50ºF-95ºF)

Degree of protection against harmful ingress of liquids (water)

Hoist . . . . . IP 20
Hand control . . . . . IP 44
Remote control . . . . . IP 20
Transformer . . . . . IP 20

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9.00 EC-Declaration of conformity

CE

Guldmann™

EC-DECLARATION OF CONFORMITY

Manufacturer	V. Guldmann A/S Graham Bells Vej 21-23A DK-8200 Aarhus N EAN country code: 57 EAN distribution No.: 07287 Phone +45 8741 3100 Fax +45 8741 3131
Representative	Company
	Address
	Country
	Phone
Hereby declare that	Product **GH3 / GH3+** **incl. lifting hanger, suspension and charging system**
	Type No. **GH3X Y ZZZ QQQQ** *x)*

x) See GH3 lifting modules, version type nomenclature

was manufactured in conformity with the provisions in according to the Council Directive 93/42/EEC of 14. June 1993 Class 1

- EN/ISO 10535:2006 — Hoists for the transfer of disabled persons - requirements and test methods
- UL 60601-1:2003 — Medical electrical equipment - Part 1-1: General requirements for safety
- IEC/EN 60601-1-2: 2001, +A1:2006 — Medical electrical equipment - Part 1: General requirements for safety - 2: Collateral standard: Electromagnetic compatibility

Skejby 8. June 2009

Place and day of issue

Product responsible

Technical Manager

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USA and countries outside the EU

A. **Users guide**

Before using the product, read the entire operation manual including all warranties.

B. **Warranties**

The Guldmann lifting equipment is designed to be used for the lifting, transferring, and transporting of a person with a physical handicap who are not able to physically self transfer or who are temporarily incapacitated by illness, anesthesia or other causes.

This lifting equipment is designed to relieve the users, their caregivers, and nursing personnel in the task of lifting elderly or disabled people, thereby minimizing the risk of back injury during such lifting and transfer operations. If the product is used irresponsibly or for any use other than that described above or in the enclosed written instructions, the manufacturer's warranty will be nullified and rendered void.

There are no warranties which extend beyond the description in the enclosed written instructions.

Guldmann warrants that its lifting equipment is free from defects in materials and workmanship under normal use. Guldmann warrants that the lifting equipment itself will perform substantially in accordance with the specifications set forth in the documentation provided with the equipment.

The above express warranties are made for a period of 365 days from the date the lifting equipment is delivered to you as the first user.

The distributor will replace any lifting equipment which proves defective in materials or workmanship, without additional charge, on an exchange basis.

The distributor will either replace or repair without additional charge any Guldmann lifting equipment that does not perform in substantial accordance with the specifications of the document.

Guldmann does not warrant that the functions contained in the lifting devices will meet your requirements or that the operation of the services will be uninterrupted or error-free. The warranty does not cover any of the part of the lifting equipment which has been subject to damage or abuse by you. The warranty does not cover any part of the lifting equipment which has been altered or changed in any way by you or others. Guldmann is not responsible for problems caused by changes in the operating characteristics of the operating system which are made after the delivery of the lifting equipment.
Any implied warranties including any warranties of merchant ability or fitness for a particular purpose are limited to the term of the express warranties.

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Guldmann shall not in any case be liable for special, incidental, consequential, indirect or other similar damages arising from any breach of these warranties even if Guldmann or its agent has been advised of the possibility of such damages.

You must call Guldmann or your distributor for an authorization to return any defective item during the warranty period. If your distributor is unable to correct your problem by telephone, you will be provided with a return authorization number and address for returning the defective item for warranty service or replacement. You must insure any defective item being returned because Guldmann does not assume the risk of loss or damage while in transit. Do not return items or warranty service to Guldmann.

The warranties set forth are in lieu of all other express and implied warranties, whether oral, written or implied, and the remedies set forth above are your sole and exclusive remedies. Only an authorized officer of Guldmann may take modifications to this warranty, or additional warranties binding on Guldmann. Accordingly, additional statements such as advertising or presentations, whether oral or written, do not constitute warranties by Guldmann and should not be relied upon as such. The warranty gives you specific legal rights, and you may also have the other rights which vary from state/country.

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Time to care

V. Guldmann A/S
Graham Bells Vej 21-23A
DK-8200 Århus N
Tel. +45 8741 3100
Fax +45 8741 3131
info@guldmann.com
www.guldmann.com